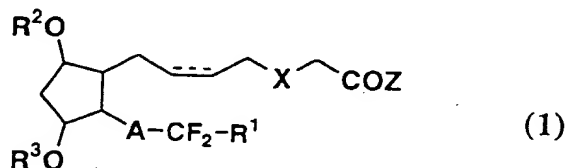


WHAT IS CLAIMED IS:

1. A fluorine-containing prostaglandin derivative of the following formula (1) or a salt thereof:



wherein A is an ethylene group, a vinylene group, an ethynylene group, -OCH₂- or -SCH₂-,

A

R¹ is a ~~substituted or unsubstituted C₃₋₈ alkyl~~ group, a substituted or unsubstituted C₃₋₈ alkenyl group, a substituted or unsubstituted C₃₋₈ alkynyl group, a substituted or unsubstituted C₃₋₈ cycloalkyl group, a substituted or unsubstituted aralkyl group or a substituted or unsubstituted aryloxyalkyl group,

15 each of R² and R³ which are independent of each other, is a hydrogen atom or an acyl group, or forms a single bond together with Z,

X is -CH₂-, -O- or -S-,

20 Z is -OR⁴, -NHCOR⁵, -NH₂SO₂R⁶ or -SR⁷, or forms a single bond together with R² or R³,

each of R⁴, R⁵, R⁶ and R⁷ which are independent of one another, is a hydrogen atom, an alkyl group, an alkenyl group, an alkynyl group, a cycloalkyl group, an aryl group or an aralkyl group,

25 and a dual line consisting of solid and broken lines is a single bond, a cis-double bond or a trans-double bond.

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2. The compound according to Claim 1, wherein A is an ethylene group or a vinylene group.
3. The compound according to Claim 1, wherein X is $-\text{CH}_2-$.
- 5 4. The compound according to Claim 1, wherein both R^2 and R^3 are hydrogen atoms.
5. The compound according to Claim 1, wherein Z is $-\text{OR}^4$.
6. The compound according to Claim 1, wherein R^1 is a substituted or unsubstituted aryloxyalkyl group.
- A 10 ²7. The compound according to Claim ¹6, wherein R^1 is a phoxymethyl group, a 3,5-dichlorophoxymethyl group or a 3-chlorophoxymethyl group.
- ³8. The compound according to Claim 1, which is 16-phenoxy-15-deoxy-15,15-difluoro-17,18,19,20-tetranorprostaglandin $\text{F}_{2\alpha}$, 16-(3-chlorophenoxy)-15-deoxy-15,15-difluoro-17,18,19,20-tetranorprostaglandin $\text{F}_{2\alpha}$, 16-phenoxy-15-deoxy-15,15-difluoro-13,14-dihydro-17,18,19,20-tetranorprostaglandin $\text{F}_{2\alpha}$ or an alkyl ester or a salt thereof.
- 20 ⁴9. A medicine containing the compound according to Claim 1 as an active ingredient.
- ⁵10. The medicine according to Claim ⁴9, which is a preventive or therapeutic medicine for an eye disease.
- ⁶11. The medicine according to Claim ⁵10, wherein the eye disease is glaucoma or ocular hypertension.
- 25 ⁷12. The medicine according to Claim ⁴9, ⁵10 or ⁶11, wherein A is an ethylene group or a vinylene group.

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~~13.~~ The medicine according to Claim ~~9~~, ~~10~~ or ~~11~~, wherein
X is $-\text{CH}_2-$.

⁹
~~14.~~ The medicine according to Claim ~~9~~, ~~10~~ or ~~11~~, wherein
both R^2 and R^3 are hydrogen atoms.

¹⁰
5 ~~15.~~ The medicine according to Claim ~~9~~, ~~10~~ or ~~11~~, wherein
Z is $-\text{OR}^4$.

~~16.~~ The medicine according to Claim 9, 10 or 11, wherein
 ~~R^1 is a substituted or unsubstituted aryloxyalkyl group.~~

A
¹¹
10 ~~17.~~ The medicine according to Claim ~~16~~, wherein R^1 is a
phenoxymethyl group, a 3,5-dichlorophenoxymethyl group or
a 3-chlorophenoxymethyl group.

¹²
15 ~~18.~~ A medicine containing 16-phenoxy-15-deoxy-15,15-
difluoro-17,18,19,20-tetranorprostaglandin $\text{F}_{2\alpha}$, 16-(3-
chlorophenoxy)-15-deoxy-15,15-difluoro-17,18,19,20-
tetranorprostaglandin $\text{F}_{2\alpha}$, 16-phenoxy-15-deoxy-15,15-
difluoro-13,14-dihydro-17,18,19,20-tetranorprostaglandin
 $\text{F}_{2\alpha}$ or an alkyl ester or salt thereof as an active
ingredient.

¹³
20 ~~19.~~ The medicine according to Claim ~~18~~, which is a
preventive or therapeutic medicine for an eye disease.

¹⁴
~~20.~~ The medicine according to Claim ~~19~~, wherein the eye
disease is glaucoma or ocular hypertension.